

## Chapter XIV

### SUMMARY AND CONCLUSIONS

#### INTRODUCTION

In August 1992, the Waukesha County Executive requested the assistance of the Southeastern Wisconsin Regional Planning Commission in preparing a County development plan. Preparation of such a plan was seen as an ambitious undertaking, with no other county in the seven-county Southeastern Wisconsin Region having completed a countywide development plan as provided for under Section 59.97(3) of the Wisconsin Statutes. Concerns regarding development patterns and trends in the County, coupled with a perceived lack of affordable housing, provided the impetus for undertaking the County planning effort. It had become increasingly evident that, in order for Waukesha County to retain and enhance its existing desirable characteristics, a plan to accommodate and manage new development while preserving open space and protecting environmentally sensitive areas was needed.

Initiated in May 1993, the planning effort involved extensive inventories and analyses of the factors and conditions affecting the physical development of the County. These included inventories and analyses of the demography, economy, housing stock, natural resources, land uses, transportation and public utilities, and existing community plans and land use regulations. The planning program further involved the formulation of County development objectives, principles, and standards; the design of a land use plan and supporting housing, transportation, and park and open space plan elements; and the identification of measures to implement the plan effectively.

While the primary purpose of the County development plan is to guide the County and the civil towns within the County in joint decision-making regarding development matters in the unincorporated area of the County, it is also intended to provide guidance to the incorporated cities and villages involved in the planning process. The participation of the cities and villages, in addition to the towns, was important because it provided a basis for determining the future scale of population and economic activity and attendant urban development within the County as a whole, thereby enabling the sound preparation of functional plan elements dealing

with transportation, recreation, and housing. The participation of cities and villages in the planning effort also permitted conflicting development objectives between the incorporated municipalities and the towns within municipal extraterritorial planning areas to be addressed. Accordingly, throughout this report, planning information has been presented for incorporated cities and villages as well as for unincorporated towns, thereby providing needed context for understanding the broader framework within which the plan recommendations for the unincorporated town territory have been made.

It should be noted that the Waukesha County development plan presented herein has been referred to and entitled a 'development plan' in deference to Section 59.97(3) of the Wisconsin Statutes, which authorizes county zoning agencies to direct the preparation of a "development plan" for the physical development of the county. The term 'growth management' has been widely used in the recent past to characterize governmental efforts to identify and influence the type, location, and timing of urban development and attendant needs for public facilities and services, transportation systems, and parks and open space, among others, while protecting the overall quality of the environment. Accordingly, the County development plan is, in fact, and may be properly referred to as, a "growth management plan."

The planning program was carried out under the guidance of the Waukesha County Development Plan Advisory Committee, consisting of representatives of the County Executive's Office; the County Board of Supervisors; the Waukesha County Departments of Environmental Resources, Parks and Land Use, and Transportation; the Waukesha Unit of the Wisconsin Towns Association; and environmental, agricultural, business, and development interests from within the County. The full membership of that Committee is listed on the inside front cover of this report.

#### EXISTING CONDITIONS

Waukesha County encompasses about 580 square miles, or about 22 percent of the area of the seven county Southeastern Wisconsin Region. In 1990, the unincorporated area of the County consisted of 13

towns, which together encompassed an area of about 374 square miles, or about 64 percent of the total area of the County. The incorporated area consisted of seven cities and 18 villages, including a small part of the City of Milwaukee. Together, the incorporated municipalities encompassed an area of about 206 square miles, or about 36 percent of the total area of the County.

Descriptions of the demography, economy, natural resources, land uses, housing stock, transportation facilities, public utilities, and existing plans and land use regulations in Waukesha County is presented in Chapters 11 through VII of this report. A summary of the descriptions presented in these chapters follows.

#### Demography and Economy

The resident population of Waukesha County was about 304,700 persons in 1990, making the County the third most populous in Wisconsin, behind only Milwaukee and Dane Counties. The County exhibited its most significant population growth after 1950. The resident population increased by 84 percent during the 1950s, 46 percent during the 1960s, 21 percent during the 1970s, and 9 percent during the 1980s. In over four decades, from 1950 through 1990, the resident population of the County increased by 255 percent, while the population of the seven-county Southeastern Wisconsin Region increased by 46 percent. As a result, the County's share of the regional population increased from about 7 percent in 1950 to about 17 percent in 1990, a reflection of the decentralization of population away from Milwaukee County. The most recent estimates by the Wisconsin Department of Administration indicate that the County resident population had increased further to about 328,600 persons by 1995, an increase of nearly 24,000 persons, or about 8 percent, over the 1990 level.

The number of households in the County increased from about 23,600 in 1950 to about 106,000 in 1990. The number of households increased by 80 percent during the 1950s, 46 percent during the 1960s, 43 percent during the 1970s, and 20 percent during the 1980s. Between 1950 and 1990, the number of households in the County increased by 349 percent, while the number of households in the Region increased by 91 percent. Accordingly, the County's share of the regional households increased from about 7 percent in 1950 to about 16 percent in 1990. During the past two decades, the rate of increase in households has exceeded the rate of population growth in the County. During this time, the average household size in the County decreased, from 3.66 persons in 1970 to 2.83 persons in 1990, reflecting, among other factors, the historic decline in

birth rates and attendant decrease in the number of children in family households, as well as an increase in the number of single-person households.

The number of employment opportunities, or jobs, in the County increased from about 15,500 in 1950 to about 172,000 in 1990. Total employment in the County increased by 99 percent during the 1950s, 148 percent during the 1960s, 67 percent during the 1970s, and 35 percent during the 1980s. Between 1950 and 1990, employment in the County increased eleven-fold, while employment in the Region increased by 79 percent. As a result, the County's share of regional employment increased from about 3 percent in 1950 to about 17 percent in 1990.

#### Natural Resource Base

Although it is a rapidly urbanizing area, Waukesha County still contains extensive areas of environmental significance. The location and extent of various elements of the natural resource base were inventoried and mapped under the planning program.

In 1990, wetlands occupied a combined area of about 81 square miles, or about 14 percent of the total area of the County; woodlands occupied about 46 square miles, or about 8 percent; and surface water, including 33 major lakes, comprised 22 square miles, or about 4 percent. Important wildlife habitat areas, identified in a 1985 inventory jointly conducted by the Commission and the Wisconsin Department of Natural Resources, encompassed about 182 square miles, or about 31 percent of the total area of the County. Floodlands, defined as areas subject to inundation by a 100-year recurrence interval flood event, not including about 24 square miles of surface water in lakes and streams, encompassed about 72 square miles, or about 12 percent of the total area of the County.

Many of the natural resource base elements of Waukesha County occur in linear concentrations in the landscape termed environmental corridors. One of the most important tasks completed under the regional planning program for Southeastern Wisconsin has been the identification and delineation of these corridors. Primary environmental corridors include a wide variety of important natural resource features and are, by definition, at least 400 acres in size, two miles long, and 200 feet wide. Secondary environmental corridors generally connect with the primary environmental corridors and are at least 100 acres in size and one mile in length. In addition, smaller concentrations of natural resource base elements that are separated physically

from the environmental corridors by intensive urban or agricultural land uses have been identified. These areas, which are at least five acres in size, are referred to as isolated natural resource areas.

Primary environmental corridors within Waukesha County are mainly associated with the natural resources located along major streams, around inland lakes, and within the Kettle Moraine and in 1990 encompassed about 145 square miles, or about 25 percent of the total area of the County. Secondary environmental corridors within the County are generally located along smaller perennial and intermittent streams and in 1990 encompassed about 12 square miles, or about 2 percent of the total area of the County. Isolated natural resource areas within the County include isolated wetlands, woodlands, and wildlife habitat areas and in 1990 encompassed about 13 square miles, or about 2 percent of the total area of the County.

The preservation of the environmental corridors and isolated natural resource areas in essentially natural, open uses will do much to maintain a high level of environmental quality in the County, protect its natural beauty, and provide invaluable outdoor recreational opportunities for the residents of the County. Conversely, since many of the corridors consist of wetland and floodland areas, the preservation of these lands will also avoid the creation of serious and costly environmental and developmental problems such as flood damage, poor drainage, wet basements, failing building and pavement foundations, excessive infiltration of clear water into sanitary sewers, and water pollution. Such preservation will also provide form and structure to urban development within the County, lending an attractive setting to various urban uses and enhancing real property values.

Analysis of detailed soil survey data indicated that portions of the County may provide important opportunities for such resource-based uses as agriculture and mineral extraction. Approximately 211 square miles, or about 36 percent of the total area of the County, are covered by soils classified as national prime farmland, consisting largely of Class I and Class II soils. Soil survey data indicate that much of the western half of the County has potentially commercially viable sand and gravel deposits; smaller areas, located primarily in the northeast portion of the County, have bedrock at, or near, the surface, and, therefore, have the potential for commercial quarrying.

#### Land Use

The most recent land use inventory conducted by the Regional Planning Commission indicated that in 1999,

urban land uses, including lands in residential, commercial, industrial, institutional, intensive recreational, and transportation uses together encompassed about 160 square miles, or about 28 percent of the total area of the County. Of the total area in urban use, about 96 square miles, or about 60 percent, were in residential uses; about 6 square miles, or about 4 percent each, were in commercial, industrial, and institutional uses; about 10 square miles, or about 6 percent, were in intensive recreational uses; and about 36 square miles, or about 22 percent, were in transportation, communication, or utility uses. For purposes of the land use inventory, the area within the rights-of-way of all streets and highways was included in the transportation, communication and utility land use category.

Between 1963 and 1990, lands in these urban categories together increased by about 75 square miles, or by about 87 percent. During this period the resident population of the County increased by 65 percent, the number of households by 123 percent, and the number of jobs by 416 percent.

The net residential land area, that is, the area devoted to residential use, excluding the supporting land access and collector streets, increased by about 48 square miles, accounting for about two-thirds of the total increase in urban land. Some of the incremental residential development occurred in and around existing urban centers; however, much of the new development occurred as scattered, isolated residential enclaves in rural areas. About 75 percent of the incremental residential land in the County between 1963 and 1990 was in the form of low or suburban-density development.

Commercial and industrial land use in the County also increased significantly between 1963 and 1990. The area devoted to commercial land use approximately tripled, from about two square miles in 1963 to about six square miles in 1990. The area devoted to industrial use increased approximately fourfold, from about one and one-half square miles in 1963 to about six square miles in 1990.

The 1990 land use inventory further indicated that nonurban land uses, that is, agricultural lands, wetlands, woodlands, surface water, quarries, landfill sites, and other open lands, together comprised about 421 square miles, or about 72 percent of the total area of the County, in 1990. Lands in agricultural use comprised about 223 square miles, or about 53 percent of all nonurban lands; wetlands, woodlands, and surface water together comprised about 154 square miles, or about 37 percent; and quarries, landfill sites, and other open lands

comprised about 44 square miles, or about 10 percent. Between 1963 and 1990, nonurban land uses in the County together decreased by about 75 square miles, or by about 15 percent.

#### Transportation and Public Utilities

Waukesha County was served by a 716-mile arterial street and highway system in 1991. In the eastern portion of the County, the arterial street and highway system is relatively densely spaced, with arterials occurring at about one mile intervals in both a north-south and east-west direction. The arterial network in the rest of the County is less densely spaced, with arterials occurring at about two-to three-mile intervals.

Fixed-route transit service within Waukesha County is provided through the Waukesha County Transit System and the City of Waukesha Transit System Utility. In 1993, the Waukesha County Transit System consisted of seven regular bus routes providing primarily commuter-oriented service between Waukesha and the Milwaukee central business district. The routes totaled about 376 round-trip miles in length within Waukesha County and provided about 1,700 revenue vehicle-miles of service per average weekday. Rather than operate these routes directly, the County contracted for all elements of their operation with Wisconsin Coach Lines, Inc., and with the Milwaukee County Transit System. In 1993, the fixed-route transit service operated by the City of Waukesha Transit System Utility consisted of nine bus routes totaling about 112 round-trip miles in length. The system provided about 2,000 revenue vehicle-miles of service per average weekday. The Transit System provided fixed-route service within the City of Waukesha and between Waukesha and some major trip generators outside of the City.

There were three public-use airports in Waukesha County in 1995: Waukesha County-Crites Field in the City of Waukesha, Capitol Airport in the City of Brookfield, and Aero Park Airport in the Village of Menomonee Falls. Two of these, Capitol Airport and Waukesha County-Crites Field, are included in the adopted regional airport system plan and accommodate most of the general-aviation activity in the County. These two airports are considered to be essential to the air transportation needs of the County, serving as reliever airports for Milwaukee County's General Mitchell Field, the only airport within the Region offering commercial service.

In 1993, Waukesha County was served by 10 public wastewater treatment plants, seven of which were located within the County. The seven treatment plants

within the County included the City of Oconomowoc treatment plant, the Village of Dousman treatment plant, the Delafield-Hartland Water Pollution Control Commission treatment plant, the Village of Mukwonago treatment plant, the City of Waukesha treatment plant, the Village of Sussex treatment plant, and the Fox River Pollution Control Center treatment plant. Much of the eastern area of the County was served by the Milwaukee Metropolitan Sewerage District, which operates sewage treatment plants located on Lake Michigan in the Cities of Milwaukee and Oak Creek. Sewerage service within the County was also provided by the Town of Norway Sanitary District No. 1 which operates a sewage treatment plant in the Town of Norway, Racine County. The 10 existing sewage treatment plants and the tributary sewage collection and conveyance systems in the County together served an area of about 102 square miles, or about 17 percent of the total area of the County. The 1990 resident population of the areas served was estimated to be 220,000 people, or about 72 percent of the total population of the County.

#### Adopted Plans

The county development plan is intended to refine and detail adopted regional plans, taking into account and integrating, as appropriate, existing County and local development objectives. The adopted regional plans most relevant to the preparation of the County development plan included the regional land use, regional transportation system, regional water quality management, and regional park and open space plans, which provided a basic framework for the preparation of the County development plan. Existing County plans most relevant to the preparation of the County development plan included the County agricultural land preservation plan and the County solid waste management plan.

In addition to the aforementioned regional and county plans, local plans have been completed by cities, villages, and towns within the County. By the end 1994, 28 of the 38 communities in Waukesha County, 6 cities, 12 villages, and 10 towns, had prepared a local master plan or the land use element of such a plan. Twenty-six of those communities had formally adopted their plans. Four cities and five villages in the County included adjacent unincorporated areas in their land use plans pursuant to the extraterritorial planning authority granted under Section 62.23 of the Wisconsin Statutes. The area of the County covered by adopted local land use plans, taking into account extraterritorial city and village planning areas, was about 484 square miles, or about 83 percent of the total area of the County. Of this total area, about 190 square miles, or 39 percent, were designated

for urban residential uses; about 32 square miles, or 7 percent, were designated for commercial or industrial uses; about 27 square miles, or 6 percent, were designated for other urban uses; and about 235 square miles, or 48 percent, were designated for nonurban uses.

#### Existing Land Use Regulations

General zoning was in effect in all communities in Waukesha County in 1993. Four towns in the County, Genesee, Oconomowoc, Ottawa, and Vernon, were under the jurisdiction of the County zoning ordinance, while the remaining 9 towns had adopted their own zoning ordinances, after adopting village powers. Floodland zoning ordinances were in effect in 1993 in all parts of Waukesha County where flood hazard areas had been identified. The County shoreland zoning ordinance was in effect in the statutory shorelands of the unincorporated area of the County. Some 19 of the 24 cities and villages in the County had adopted shoreland wetland zoning ordinances. Of the five remaining villages, three, the Villages of Eagle, North Prairie, and Wales, did not contain any shoreland wetlands and were thus not required to adopt such ordinances; two, the Villages of Lannon and Pewaukee, although containing shoreland wetlands, had not yet adopted such ordinances.

In 1993, lands zoned for urban residential use, including lands placed in agricultural districts permitting residential development on lots of less than five acres, encompassed a total of about 302 square miles, or about 52 percent of the total area of the County. About 165 square miles, or about 55 percent of the total area zoned residential, was undeveloped and available for development. This included about 95 square miles zoned for suburban-density development, about 60 square miles for low-density development, about eight square miles for medium-density development, and about two square miles for high-density development. It is estimated that, upon full development, such lands would be able to accommodate an additional 230,000 persons, about 73 percent more than the 1990 resident population of the County of 304,700 persons. At the rate of growth in population envisioned for Waukesha County under an intermediate-growth scenario, it would take about 50 years to utilize fully all the proposed additional residential land in the County. It is thus apparent that the County as a whole has been overzoned for residential use.

Land zoned for commercial use in Waukesha County encompassed about 14 square miles, or about 2 percent of the total area of the County, in 1993. About four and one-half square miles, or 31 percent of this total, were

undeveloped and available for development. Land zoned for industrial use encompassed about 24 square miles, or about 4 percent of the total area of the County. About eight and one-half square miles, or about 35 percent of this total, were undeveloped and available for development. At the rate of growth in commercial and industrial employment envisioned for Waukesha County under an intermediate regional growth scenario, it would take about 50 years to utilize fully all the proposed additional commercial land and 90 years to utilize fully all the proposed additional industrial land. It is thus apparent that the County as a whole has also been overzoned for commercial and industrial use.

Lands zoned for nonurban use encompassed about 213 square miles, or about 37 percent of the total area of the County, in 1993. Lowland conservancy zoning districts encompassed about 106 square miles, or about 18 percent of the total area of the County, while upland conservancy zoning districts, permitting residential development at a density of at least five acres per dwelling unit, encompassed about 1.6 square miles, or less than 1 percent, of the County area. Rural residential zoning districts, also permitting residential development at a density of at least five acres per dwelling unit, encompassed about 12 square miles, or about 2 percent of the total area of the County. Prime agricultural zoning districts, with minimum parcel sizes of 35 acres or more, encompassed about 47 square miles, or about 8 percent of the total area of the County. About 13 square miles, or 2 percent of the total area of the County, had been placed in other agricultural zoning districts, with minimum parcel sizes ranging between five and 35 acres.

#### Housing

As already noted, the impetus for the preparation of the County development plan derived in part from a concern regarding a lack of affordable housing in Waukesha County. The planning program, therefore, included a detailed inventory and analysis of the existing housing stock and attendant housing occupancy costs. On the basis of the 1990 Federal Census of Population and Housing, there were about 110,500 housing units in Waukesha County in 1990, 106,000 of which were occupied at the time of the Census and 4,500 of which were vacant. Of the occupied housing stock, about 82,000 housing units, or about 77 percent, were owner-occupied and about 24,000 housing units, or about 23 percent, were renter-occupied. The proportion of owner-occupied housing in Waukesha County, 77 percent, was greater than for the Region, 61 percent, and for the State, 67 percent. The median value of owner-occupied housing units was \$96,100 for Waukesha County in 1990, significantly higher than that for the Region,

\$74,200, and for the State, \$62,100. The median gross monthly rent for renter-occupied housing units was \$540 for Waukesha County in 1990, also significantly higher than that for the Region, \$440, and for the State, \$400.

About 1,900 households, or about 2 percent of all households in the County, resided in substandard or overcrowded housing in 1990. Such households are considered to have a physical housing need, according to the housing standards adopted by the Waukesha County Development Plan Advisory Committee. About 20,400 households, or about 19 percent of all households in Waukesha County, paid more than 30 percent of their adjusted gross income for housing in 1990 and were considered to be in economic need, based upon the housing standards adopted by the Advisory Committee. About 13,500 of the households in economic need had a 1990 household income of less than \$27,500 and were considered to be in greatest housing need or most likely unable to secure adequate housing in the County at a cost commensurate with their incomes. It was also estimated that in 1990 there were about 6,500 households residing outside of the County, which included workers who commuted to work-places in Waukesha County and would choose to live in the County if they could do so at a cost commensurate with their incomes.

The estimated costs to construct new minimum-size housing in Waukesha County in 1994 ranged from about \$105,400 for a 3-bedroom single-family housing unit situated on a 7,200 square foot lot to about \$35,200 for a one-bedroom housing unit in a multi-family structure developed at an overall density of about 14 units per acre. Significant cost savings can be achieved by providing new housing in the form of two-family and multi-family structures. For example, in 1994 the estimated cost to provide a minimum-size two-bedroom single-family home, \$85,400, was about \$25,000, or 42 percent, more than the cost of a minimum size two-bedroom unit in a two-family structure, \$60,300, and about \$36,000, or 74 percent, more than the cost of a minimum-size two-bedroom unit in a multi-family structure, \$49,100.

Housing structure types, housing unit sizes, and lot sizes are all regulated by community zoning regulations. The existing zoning ordinances in the County as applied to undeveloped land were analyzed to identify the extent to which they would accommodate minimum-size housing and minimum-size lots with various residential structure types. The analysis identified about 39 square miles of vacant residentially zoned land located within planned sanitary sewer service areas, excluding any such lands located within environmental corridors. About one square mile, or less than 3 percent of this area, was

zoned to accommodate minimum-size housing units on minimum-size single and two-family residential lots or minimum-size housing units in multi-family structures at densities greater than or equal to 14 units per net residential acre.

A number of local, County, State, and Federal programs have been put in place to lessen physical and economic housing problems in the County; a summary of these programs is provided in Table 107 in Chapter VII of this report. It was estimated that about 4,000 households in the County received assistance ranging from homebuyer counseling to substantial rent subsidy under these programs in 1994. The level of government activity in housing within the County does not appear to be sufficient to meet existing and probable future housing needs in the County, particularly among households having lower incomes.

#### COUNTY DEVELOPMENT PLAN OBJECTIVES, PRINCIPLES, AND STANDARDS

Planning is a rational process for formulating and achieving objectives. Consequently, the formulation of objectives is an essential task that must be undertaken before plans can be prepared. As a basis for the preparation of the County development plan, the Waukesha County Development Plan Advisory Committee recommended a set of land use, housing, transportation and park and open space objectives, supporting principles, and related standards. The objectives and standards were derived from objectives and standards contained in adopted regional plans which were considered by the Advisory Committee to be applicable to, and supportable by, Waukesha County and the local units of government in the County.

The land use objectives are concerned with the allocation of land to the various land use categories, the spatial distribution of the various land uses, the protection of the natural resource base, and the preservation of environmentally sensitive lands and prime agricultural lands in the County. The housing objectives are concerned with the provision of decent, safe, and sanitary housing, the provision of a full range of housing types and sizes, and the provision of adequate locational choice in housing. The transportation objectives are concerned with the provision of a flexible multi-modal transportation system, the alleviation of traffic congestion, the reduction of travel time and accident exposure, and the minimization of costs and disruption of communities and the natural environment. The park and open space objectives are concerned with the quantity and spatial distribution of parks and other outdoor recreation sites and facilities required to meet

the needs of County residents and with the protection of open space lands for resource preservation and outdoor recreation purposes.

Among the various planning standards, the standard deliberated upon at greatest length by the Advisory Committee was the land use planning standard pertaining to the identification and delineation of 'prime' agricultural lands. Under the currently adopted regional land use plan and the Waukesha County agricultural land preservation plan, prime agricultural areas were defined as areas consisting of farm units which meet the following criteria: 1) the farm units must be at least 35 acres in size, 2) at least 50 percent of the farm units must be covered by soils meeting U. S. Natural Resources Conservation Service criteria for National prime farmland or farmland of Statewide importance, and 3) the farm units must be located in a contiguous block of similar farmland at least 100 acres in size.

After careful consideration, taking into account changes in farming practices and the types of farms in the County, as well as the extent of urban development in the County since the 1970s, the Advisory Committee recommended changes to the criteria on soil productivity and block size to be used in identifying prime agricultural areas. Specifically, the Committee recommended that prime agricultural areas be identified as consisting of farm units which are at least 35 acres in size; at least 50 percent of which are covered by National prime farmland; and which are located in a contiguous block of similar farmland of at least five square miles in size. The removal of soils of Statewide importance from consideration in identifying prime agricultural areas, together with the increase in the farming block size criterion from 100 acres to five square miles, had the effect of substantially reducing the amount of land identified as prime agricultural land under the County development plan as compared to the amount under the regional land use plan and the County agricultural land preservation plan. .

## RECOMMENDED COUNTY DEVELOPMENT PLAN

The development plan for Waukesha County presented in this report consists of four elements, each pertaining to a key aspect of the physical development of the County: land use, housing, transportation, and parks and open space. The land use element is the most basic of the four plan elements, inasmuch as it establishes the basic settlement pattern, expressed in terms of land use, population, household, and employment levels, recommended for the County. The other three plan elements were, in turn, developed within the framework of the recommended land use plan. The land use,

housing, transportation, and park and open space plan elements comprise the core of a development plan for the County. This core may be supplemented over time through the preparation of additional plan elements for other functional areas, in response to changing needs within the County.

## LAND USE PLAN

A preliminary land use plan was completed for public review and comment late in 1995. That plan was prepared so as to be consistent with the County development objectives and standards recommended by the Advisory Committee, incorporating to the extent practicable the provisions of all adopted city, village, and town land use plans. Where local land use plan recommendations were found to be inconsistent with the County development objectives, the County land use plan was designed to meet, to the extent practicable, those objectives. In areas where no adopted local land use plan existed, a recommended land use pattern was developed in accordance with the County development objectives. Within the extraterritorial planning areas of cities and villages, where conflicts were found to exist between adopted city or village plans and adopted town plans, the County land use plan was designed to accommodate whichever local plan was found to be most consistent with the County development objectives. Where both an extraterritorial plan and a town plan were found to be inconsistent with the County development objectives, neither plan was incorporated into the County land use plan; a land use plan for the affected area was developed in accordance with the County development objectives.

During the four-month period from mid-November 1995 through mid-March 1996, the preliminary plan was presented for public review and comment in a series of seven intergovernmental meetings held throughout the County and 20 additional meetings with local officials and interested citizens. Utilizing information provided at these meetings, including information pertaining to recent urban development and recent local approvals of subdivision plats and certified survey maps not reflected on the preliminary plan, a final recommended plan was prepared. Similar to the preliminary plan, the final recommended plan was prepared to meet the Advisory Committee-approved County development objectives.

It should be noted that the planning process recommended by the Advisory Committee represents a departure from conventional land use planning practices, under which the amount of land allocated to various land use categories is determined largely by forecast increases in population, household, and employment levels over a

chosen plan design period, normally 20 years. Duly adopted local land use plans, rather than forecasts of population, households, and economic activity, however, were a major determinant of the amount of land allocated to the various urban land use categories in the preparation of the County development plan. This approach was necessary given the statutory requirements governing county planning.

The recommended land use plan is summarized graphically on Map 87 in Chapter X of this report. The plan is a "buildout" plan; the planned land use, population, household, and employment levels reflect conditions which may be expected upon full development of the areas proposed to be devoted to the various land uses identified in the plan. The "buildout" conditions would probably not occur until after the year 2050.

#### Planned Urban Land

Under the recommended land use plan, gross urban land uses, those lands devoted to residential; commercial; industrial; governmental and institutional; recreational; and transportation, communication, and utility uses, would increase by about 106 square miles, or about 72 percent, from about 148 square miles in 1990 to about 254 square miles under buildout conditions. Such urban land uses, which comprised about 26 percent of the total area of the County in 1990, would account for about 44 percent of that area of the County under buildout conditions. For purposes of the plan, the area within the rights-of-way of standard arterial, collector, and land access streets was included in the adjacent urban or rural land use categories.

Under the plan, urban residential land use would increase by about 78 square miles, or about 73 percent, from about 108 square miles in 1990 to about 186 square miles under buildout conditions. The proportion of the County devoted to urban residential land uses would increase from about 19 percent in 1990 to about 32 percent under buildout conditions. Of the planned increase in urban residential uses, about 62 percent would be developed at low density, defined as 20,000 square feet to 1.4 acres of net lot area per dwelling unit, and at suburban density, defined as 1.5 to 4.9 acres of net lot area per dwelling unit.

The plan envisions a substantial increase in the area devoted to commercial and industrial land uses. Under the plan, commercial land uses would increase by about six square miles, or about 86 percent, from about eight square miles in 1990 to about 14 square miles under buildout conditions. Industrial land uses would increase

by about 12 square miles, or about 185 percent, from about seven square miles in 1990 to about 19 square miles under buildout conditions. Commercial and industrial land uses, each of which approximated about 1 percent of the total area of the County in 1990, would comprise about 2 percent and 3 percent, respectively, of that area under buildout conditions.

Other urban land uses, consisting of governmental and institutional; recreational; and transportation, communication, and utility uses, together would increase by about nine square miles, or about 35 percent; from about 26 square miles in 1990 to about 35 square miles under buildout conditions. The proportion of the County area devoted to these uses would increase from about 4 percent in 1990 to about 6 percent under buildout conditions.

#### Planned Nonurban Land

Under buildout conditions, nonurban land uses, consisting of environmentally sensitive lands, other open lands to be preserved, prime agricultural lands, other agricultural and rural residential lands, and extractive lands, would decrease by about 106 square miles, or about 25 percent, from about 432 square miles in 1990 to about 326 square miles under buildout conditions. Nonurban land uses, which comprised about 74 percent of total area of the County in 1990, would comprise about 56 percent of that area under buildout conditions.

The plan recommends the preservation of primary environmental corridors in essentially natural, open uses. Under the plan, development within the primary environmental corridors would be limited to that needed to accommodate required transportation and utility facilities, compatible outdoor recreation facilities, and carefully sited residential uses at rural densities on a limited basis. The plan recommends that secondary environmental corridors be considered for preservation in natural, open use or incorporated as drainageways or local parks in developing areas. The plan recommends that isolated natural resource areas be preserved in natural, open use insofar as practicable recognizing that these areas are often well suited for use as public or private parks and open space reserves. Under the plan, primary and secondary environmental corridors and isolated natural resource areas combined would increase by about two square miles, or about 1 percent, from 170 square miles in 1990 to about 172 square miles under buildout conditions. This increase would occur as certain currently farmed floodlands adjacent to primary and secondary environmental corridor lands within planned sewer service areas revert, over time, to a natural condition, becoming part of the environmental corridor



network as urbanization of adjoining upland areas proceeds. In addition, the plan recommends the permanent preservation of certain other open lands, most of which are located adjacent to the identified environmental corridors and isolated natural resource areas. These areas include 100-year recurrence interval floodlands in planned rural areas, lands within existing County or State park and open space sites, and lands covered by soils poorly suited for urban development. Such lands encompass about 11 square miles, or about 2 percent of the total area of the County.

Under the recommended County land use plan, prime agricultural lands in the County would decrease by about 47 square miles, or about 74 percent, from about 64 square miles in 1990 to about 17 square miles under buildout conditions. Such lands, which comprised about 11 percent of the total area of the County in 1990, would account for about 3 percent of that area under buildout conditions. The anticipated loss in prime agricultural lands would occur as a result of the conversion of such land to intensive urban use, primarily within expanding urban service areas and as a result of the reclassification of prime agricultural lands to rural-density residential and other agricultural lands. Areas would be reclassified in this manner when, as a result of intruding urban development, the areas are fragmented to the extent that they no longer meet the block size criteria inherent in the definition of prime agricultural land. Prime agricultural lands, which are recommended for preservation under the plan, would be retained exclusively in agricultural and agriculture-related uses, with minimum parcels of at least 35 acres in size in order to preserve workable farm units and discourage the further intrusion of incompatible urban development into the remaining agricultural areas.

Under the plan, rural residential and other agricultural lands are defined as agricultural or related open lands which do not meet the criteria for designation as prime agricultural land but which are proposed to be retained in rural use, including rural-density residential use. For purposes of the plan, rural-density residential use is defined as residential use at a gross density of no more than one dwelling unit per five acres of open land. Under buildout conditions, rural residential and other agricultural lands would encompass about 115 square miles, or about 20 percent of the total area of the County. In accommodating rural residential development, the plan encourages the use of clustering techniques which confine dwelling units to a relatively small portion of a development site while retaining the rest of the site in open space uses, thereby preserving the

rural character and open space environment historically associated with the County.

The plan recognizes that, while the County contains an abundance of nonmetallic mineral resources, including sand, gravel, and dimensional stone, efforts to extract such resources are increasingly constrained by the continued urbanization of the County. The plan seeks to preserve and protect lands for mineral extraction before they are developed for urban use or effectively precluded from extractive use by further urban development of adjacent areas. The areas identified for extractive use under the recommended plan encompass about 11 square miles, or about 2 percent of the total area of the County. It should be recognized in this respect that mineral extractive activity is an interim use, and further, that mining activity at any given site usually proceeds in phases, with early phases undergoing restoration while later phases are being mined. Accordingly, the total area of the County being actively mined at any point in time may be expected to be significantly less than 11 square miles.

#### Planned Population, Households, and Employment

Upon full development of the urban residential areas envisioned under the recommended County land use plan, the resident population of the County would increase by about 204,000 persons, or about 67 percent, from about 305,000 persons in 1990 to about 509,000 persons under buildout conditions. The number of households in the County would increase by about 84,000, or about 80 percent, from about 106,000 households in 1990 to about 190,000 households under buildout conditions. In addition, if all the areas identified on the plan as rural residential and other agricultural lands were developed at a density of one housing unit per five acres, an additional 43,100 persons, representing 14,900 additional households, would be accommodated within the County under buildout conditions. Under such conditions, the recommended County land use plan would accommodate a total resident population of about 552,000 persons and about 205,000 resident households.

Under the recommended County land use plan, the number of employment opportunities, or jobs, in the County would increase by about 200,000 jobs, or about 116 percent, from about 172,000 jobs in 1990 to about 372,000 jobs under buildout conditions.

In order to provide perspective on the level of growth envisioned under the County development plan, a comparison was made between the buildout plan population, household, and employment levels, levels

which are largely an outgrowth of the local land use plans which were incorporated into the County plan, and levels projected by the Regional Planning Commission for the year 2010 under the regional intermediate-growth and high-growth scenarios. The analysis indicated that resident population and household levels envisioned under plan buildout conditions were within 7 percent of the year 2010 levels projected under the Commission's high-growth scenario and that the population and household levels under plan buildout conditions substantially exceed, by 40 percent and 44 percent, respectively, the levels projected under the intermediate-growth scenario. The analysis further indicated that total employment envisioned under the County land use plan buildout conditions substantially exceeds even the highest Commission employment projections for the County for the year 2010. Thus, the number of jobs in the County under plan buildout conditions exceeds the year 2010 high-growth scenario employment projection by about 45 percent and exceeds the intermediate-growth scenario employment projection by about 86 percent.

#### Planned Sanitary Sewerage Service

Under the recommended County land use plan, most of the proposed new urban development within the County would be served with public sanitary sewer facilities. In addition, public sanitary sewer service would be extended to certain urban areas existing in 1990 but lacking such facilities. The resident population served by public sanitary sewers would approximately double, from about 220,000 persons in 1990 to about 452,000 persons under buildout conditions. The proportion of the County population so served would increase from 72 percent in 1990 to 82 percent under buildout conditions.

#### Year 2010 Stage of the Land Use Plan

The pattern of land uses proposed in the County land use plan will not be brought about immediately, but will emerge gradually over a long period of time, with full development not likely to occur until after the year 2050. In order to assist the County and local units of government in staging development over time as well as to facilitate functional planning for transportation and public utility facilities, planning which is commonly undertaken for a 20-year time frame, a year 2010 stage of the County development plan was prepared. A graphic summary of land uses in the County envisioned under the 2010 stage of the plan is shown on Map 90 in Chapter X of this report.

It should be noted that the 2010 stage of the County land use plan is intended to describe the level of urban development which might reasonably be expected to occur in the County by the year 2010. It is presumed

that, provided with a realistic, consensus-based framework upon which to gauge the scale of future urban development, the cities, villages, and towns within the County will undertake efforts to refine and detail the County land use plan through the preparation of new or updated local land use plans and land use regulatory ordinances to ensure that new urban development proceeds efficiently and in a manner consistent with County-wide development objectives. It is in the best interests of the cities, villages, and towns concerned to manage development through proper staging of land use plans in order to minimize infrastructure needs and costs and to preserve open space, both within their respective jurisdictions and within the County as a whole. The year 2010 stage of the County land use plan envisions substantial increases in urban land uses in the County. Thus, total urban land use would increase by about 59 square miles, or 40 percent, from 148 square miles in 1990 to about 207 square miles by the year 2010. The incremental urban land between 1990 and 2010 would include about 43 square miles of urban residential land, about seven square miles of commercial and industrial land combined, and about nine square miles of other urban lands.

Under the plan, the resident population of the County would increase from about 305,000 persons in 1990 to about 385,000 persons by the year 2010, an increase of about 80,000 persons, or about 26 percent. The number of households would increase from about 106,000 in 1990 to about 143,000 by the year 2010, an increase of about 37,000 households, or about 35 percent. Total employment would increase from about 172,000 jobs in 1990 to about 249,000 jobs by the year 2010, an increase of about 77,000 jobs, or about 44 percent.

#### Land Use Plan Implementation

The recommended land use plan provides a design for the attainment of the urban and rural development and open space preservation objectives contained in the plan. However, the plan is not complete until the means to implement the plan, that is, to convert the plan into action policies and programs, are specified. The various actions required to implement the plan were described in the final section of Chapter X of this report. The most important plan implementation actions pertaining to the urban development areas, rural development areas, environmentally sensitive areas, and prime agricultural areas envisioned under the plan are summarized below.

Land Use Plan Implementation for Urban Development Areas: One of the initial steps recommended for implementation of the County land use plan as it pertains to the proposed urban development areas is the

preparation of detailed development and redevelopment plans for the residential neighborhoods and special-purpose districts which comprise the proposed urban service areas. Within the context of the County plan, detailed development plans should be prepared for each neighborhood or special-purpose district in which significant growth or change is expected. Zoning regulations should be reviewed and adjusted, as necessary, to ensure the proper staging of development over time. In this respect, the application of urban zoning districts should proceed incrementally. The premature zoning of lands for urban use should be avoided so as to prevent the creation of additional isolated urban enclaves and incomplete neighborhoods. Accordingly, the areas concerned should be placed in zoning districts consistent with their existing use and should be rezoned into appropriate urban districts only when development has been proposed and approved and essential facilities and services can be readily provided.

Land Use Plan Implementation for Rural Development Areas: Recommended plan implementation efforts within the proposed rural development areas similarly include additional local planning efforts to refine and detail the general recommendations of the County land use plan and the adjustment of zoning as necessary to implement the plan, as refined. Planning and zoning should be carried out in such a manner as to preserve rural character. First, new residential development should be limited to an overall density of no more than one dwelling unit per five acres of open land within the planning area. This density is intended to provide a basis for determining the maximum number of additional dwelling units which should be accommodated. The number should be calculated by dividing by five the total acreage within the rural planning area currently in open use, including primary and secondary environmental corridors, isolated natural resource areas, and other open lands to be preserved, but excluding the acreage of major public land holdings and major water bodies.

Second, to the maximum extent practicable, the dwelling units which may be accommodated in accordance with the overall five-acre density should be developed by using residential cluster designs, in which dwelling units are grouped together on a relatively small portion of the site. The residential clusters should be limited in size, surrounded by open space, and, as may be necessary, contain open space. The clustered lots should be no larger than necessary to accommodate the residential structures, driveways, and desired yards, including, as necessary, space for an onsite soil-absorption sewage-disposal system and replacement system area. This can usually be accomplished on lots no greater than one acre

in size. The lot size may be reduced when a sewage-collection system is installed and waste treatment provided at a common waste-treatment facility. Such a facility could consist of a large common holding tank or a large common soil-absorption sewage disposal system operated as a public utility. Water supply could also be provided by distribution mains served by a common well operated as a public utility. Third, to the extent practicable, residential clusters should be located in areas which are visually screened from public roadways, so that existing rural vistas are maintained; should be carefully adjusted to topographic and other natural features, taking full advantage of the settings provided by those features without causing undue disturbance; and should be buffered from nearby agricultural and mineral extraction lands, as appropriate, so as to minimize conflicts between farming or mining and residential uses.

Fourth, other intensive land uses should be limited to uses which are consistent with the rural character of the area or otherwise essential to the area, including, among others, animal hospitals and veterinary clinics, riding stables, and garden shops. In general, office, commercial, industrial, and storage uses and the types of retail and service uses that are provided as a matter of convenience and necessity in urban residential neighborhoods should not be considered appropriate within rural development areas. Fifth, lands within the rural development areas which are not designated for residential or other compatible intensive use should be retained in general agricultural and other open space use. Potential agricultural uses include traditional farming, hobby farms, and community supported agriculture. Land not used for farming should be kept free of development, except for recreational trail facilities and access facilities for the benefit of those who own an interest in the land.

It should be noted that, in many cases, it will be necessary to revise zoning and subdivision control ordinances to accommodate the recommended residential cluster development designs. Clustering may be accommodated in rural areas through a variety of zoning approaches. Clustering may be permitted by conditional use or by right in a basic district or through an overlay district. In addition, when the concept of the transfer of development rights is used, residential clustering principles can be used on a communitywide basis to achieve better site designs and preserve open space. Subdivision regulations regarding street improvement standards, sewer and water facilities, stormwater management, landscaping, and open space preservation may also need revision to adequately

promote and regulate cluster development. Residential cluster zoning provisions should require the use of legal restrictions to ensure the preservation of lands which are to be permanently preserved in agricultural or other open space use.

Land Use Plan Implementation for Prime Agricultural Areas: Areas which have been designated as prime agricultural land should be placed into an exclusive agricultural zoning district, which permits only agricultural and agriculture-related uses. Such a district should provide for a minimum parcel size of 35 acres and prohibit incompatible urban development. No structure or improvement should be permitted unless it is consistent with agricultural use. In general, residences should be limited to those required for the farmer, farm laborers, and parents and children of the farmer.

Purchase of development rights programs, programs which involve the use of public or private funding to acquire development rights to privately held lands, thereby ensuring the permanent preservation of such lands in agricultural use, may be used to supplement protective agricultural zoning.

Land Use Plan Implementation for Environmental Corridors: Areas which have been identified as primary environmental corridors, secondary environmental corridors, and isolated natural resource areas occur within both urban and rural development areas and within prime agricultural areas. Environmental corridors and isolated natural resource areas should be placed in one of several zoning districts, depending upon the type and character of the natural resource features to be preserved and protected. All lakes, rivers, streams, wetlands, and associated undeveloped floodlands and shorelands should be placed in lowland conservancy or floodplain protection districts. Upland woodlands and areas of steep slopes should generally be placed in appropriate upland conservancy, rural-density residential, or park and recreation districts. Through proper zoning, residential development should be confined to upland environmental corridors, excluding areas of steep slopes, and should be limited to a density of no more than one dwelling unit per five acres, with provision made as may be appropriate for clustering. Zoning applied to the environmental corridors should, however, accommodate necessary public facilities, such as crossings by streets and highways, utility lines, and engineered flood control facilities, but should require that the location, design, and development of the facilities concerned be sensitive to the protection of the existing resource features, and require that, to the extent possible following construction, disturbed areas be restored to preconstruction conditions.

Other Land Use Plan Implementation Measures: Adoption of local official maps can contribute significantly to the implementation of the recommended County land use plan. Local units of government should prepare and adopt local official maps pursuant to Section 62.23(6) of the Wisconsin Statutes, showing thereon lands needed for future public use as streets, highways, transit ways, parkways, drainageways, parks and playgrounds. The official map should be amended from time to time to incorporate the additional street and other public land requirements identified in detailed neighborhood unit development plans or rural area development plans, as those plans are prepared over time.

Land subdivision ordinances should be adopted by the County and local units of government as a basis for the review and approval of subdivision plats and certified survey maps. Any proposed departure from adopted land use plans should be carefully considered and approved only if such departures are found to be in the public interest. It should be noted that the existing Waukesha County subdivision control ordinance applies only to the statutory shorelands within the unincorporated area of the County. The plan recommends that the County strengthen its ability properly to review proposed land divisions throughout the County, building on the County land division approval authority provided by State law in the unincorporated territory of the County and the land division objection authority provided by State law in the incorporated territory of the County. The objection authority extends to any conflicts with park, parkway, major highway, airport, drainageways, schools, or other planned public developments. A uniform Countywide approach could be accomplished by enacting a comprehensive land division ordinance providing appropriate guidelines and standards for use by the County when exercising both its approval and its objection authorities. With such an ordinance in place, the County would be able to strengthen plan implementation efforts, particularly in those cases where the County and towns are not able to adjust existing zoning in accordance with the plan.

## HOUSING PLAN

While there has been substantial growth in the housing stock in the County over the past several decades, there is nevertheless a shortage of affordable housing. That shortage limits the opportunity of workers to live in the County, where continued economic growth is dependent in part upon the continued growth in the resident labor force; necessitates longer work trips for those unable to secure housing near their place of work; and results in

physical and economic hardship for certain households. The housing element of the County development plan is intended to guide the County and local units of government and the private sector in efforts to increase the supply of affordable housing.

#### Affordable Housing Allocation Strategy

A key component of the housing plan element is an affordable housing allocation strategy which indicates the total number of affordable housing units that should be provided within the County during the period from 1990 to 2010 and recommends a geographic distribution of those housing units within the County. Underlying the affordable housing allocation strategy is the principle that areas which provide a full range of employment opportunities should provide a full range of housing opportunities. The proposed allocations should not be considered quotas; rather, they should be considered as targets indicating the scale of effort in the provision of affordable housing that is warranted by historical and anticipated future job growth. The allocation strategy is thus intended to serve as a guide for concerted efforts on the part of the public and private sectors to ensure the provision of affordable housing commensurate with job growth.

The allocation strategy recommends the provision of a total of about 11,300 affordable housing units within the County between 1990 and 2010. Of that overall goal, about 1,900 housing units, or 17 percent, relate to, and are intended to eliminate, existing substandard and overcrowded housing conditions in the County. The other 9,400 units, or 83 percent of the overall goal, relate directly to the expanding employment opportunities within the County. Specifically, about 6,500 units relate to an existing shortage of affordable housing for persons who already work in the County but cannot afford to live in the County and about 2,900 units relate to the additional housing need attendant to employment growth anticipated between 1990 and 2010.

The housing allocation strategy recommends the geographic distribution of the required affordable housing among nine planning analysis areas in the County, each consisting of a community or group of contiguous communities. Each such area was assigned a share of the overall affordable housing goal for the County in direct relation to the incidence of substandard and overcrowded housing conditions in the area, the area's current employment level, and anticipated future employment growth in the area. The allocation strategy also took into account past efforts in the provision of

affordable housing in each area, reducing or increasing the recommended goal in accordance with previous efforts. Among the nine planning analysis areas, the affordable housing goals ranged from about 160 housing units in the Dousman-Eagle area to about 2,880 housing units in the Waukesha-Pewaukee area.

#### Housing Plan Implementation

The housing allocation strategy accomplishes an important, but limited, function: it establishes affordable housing goals for the County and subareas of the County. The allocation by itself, however, does not result in the provision of any additional affordable housing. The provision of affordable housing in accordance with the housing allocation strategy will require concerted efforts on the part of private and nonprofit entities working in collaboration with local units of government and the County.

The provision of additional affordable housing as recommended in the allocation strategy will require some revision of local zoning ordinances. The plan recommends that each community in the County containing land within an existing or proposed public sanitary sewer service area review its residential zoning district regulations and revise those regulations as appropriate so as to provide for a full range of housing structure types, single-family, two-family, and multi-family, and to allow for minimum size dwellings on minimum-size lots in some areas. The plan further recommends that each such community should consider establishing planned unit development provisions in its zoning ordinance, since the design of sites involving smaller dwelling units and higher density may be significantly enhanced through planned unit development techniques.

The housing plan further recommends that existing public and quasi-public housing agencies, including Community Housing Initiative, Inc., the Waukesha County Lender Consortium, the Waukesha County Homebuyer Program, the Waukesha County Community Development Block Grant Board, the Waukesha County Housing Authority, the City of Waukesha Housing Authority, and the City of New Berlin Housing Authority, continue to pursue efforts to provide affordable housing in the County. Owing to a dramatic decrease in Federal funding of housing assistance programs during the 1980s, these local agencies have been called upon to assume a greater role in addressing housing problems. The housing plan recommends that these agencies continue to explore new and innovative

ways to provide affordable housing, leveraging the maximum of private sector involvement possible in such efforts.

Over the past several years, the County Executive's Office has assumed a leading role in coordinating housing programs within the County and sponsoring new housing initiatives. The housing plan recommends that the County Executive's Office continue that role in the immediate future, recognizing that the County Executive may wish to transfer that role to another county department at some time.

## TRANSPORTATION PLAN

Development of Waukesha County in accordance with the recommended County land use plan through the year 2010 and beyond will require major improvements to the County transportation system. Chapter XII of this report presented an arterial street and highway system plan and a public transit system plan intended to serve the County through the year 2010. It also described additional functional improvements to the arterial street system and additional public transit services which may be expected to be required to serve the County under full development of the recommended County land use plan, conditions which, as already noted, are not likely to be achieved until after the year 2050.

### Arterial Streets and Highways

The arterial street and highway system plan included in the County development plan is the system plan recommended for Waukesha County under the year 2010 regional transportation system plan, adopted by the Waukesha County Board of Supervisors in June 1995 and reaffirmed in the second-generation jurisdictional highway system plan for the County adopted by the County Board in July 1995. The proposed arterial street and highway system would adequately serve and support the pattern of urban land uses in the County envisioned under the year 2010 stage of the recommended County land use plan.

The recommended year 2010 arterial street and highway system plan for the County consists of 774 center line miles of arterial facilities (see Map 94 in Chapter XII). This represents an increase of 58 centerline miles over the arterial system as it existed in 1991 and includes 26 miles of new facilities proposed to be constructed and 32 miles of existing land-access and collector streets proposed to be converted to arterial facilities by the year 2010. About 134 miles of existing facilities included in the proposed 774-mile arterial street and highway

system would be widened to provide additional travel lanes. Under the plan, then, the capacity of the arterial street system in the County would be expanded through widening or new construction by a total of 160 miles, nearly a 21 percent expansion of the capacity of the 774-mile system. The rest of the proposed system, 614 miles, consists of existing facilities which would need to be preserved through resurfacing or reconstruction, as appropriate.

Under the year 2010 plan, State trunk highways would account for about 230 miles, or 30 percent, of the total system mileage within the County; County trunk highways would account for about 413 miles, or 53 percent; and local trunk highways would account for about 131 miles, or 17 percent.

Total capital costs of the arterial street and highway system, that is, the cost required for system expansion, including related land acquisition costs and system preservation costs, would approximate \$694 million in 1994 dollars. The State trunk highways account for \$393 million, or 57 percent of the capital cost; the County trunk highways account for \$243 million, or 36 percent; and the local trunk highways account for \$58 million, or 8 percent.

With respect to the County component of the arterial street and highway system plan, it should be noted that the average annual capital expenditure required by the County would approximate \$15.25 million. This compares to an annual anticipated availability of funds or capital outlay of \$11.19 million, including an annual average capital outlay for highways by Waukesha County of \$4.08 million, equal to the annual average capital outlay over the years 1988 through 1993; an average availability of \$4.00 million in Federal and State capital aids; and an annual average availability of \$3.11 million in State general transportation aids.

Growth in the County after the year 2010 envisioned under the buildout land use plan would necessitate arterial street and highway improvements beyond those recommended in the year 2010 arterial street and highway system plan. A total of 108 miles of facilities included in the 2010 arterial system plan, including 16 miles of freeway and 92 miles of standard arterial streets, would have to be widened to accommodate the buildout conditions. In addition, the arterial system would have to be expanded by including Guthrie Road between Sunset Drive and STH 164; by extending Springdale Road from Capitol Drive (STH 190) to Lisbon Road (CTH K); and by constructing an arterial

highway between STH 59 and CTH ZZ, west of North prairie. These three additions would add nine centerline miles to the arterial system, resulting in a buildout plan arterial system mileage of 783 miles. Under buildout conditions, the capacity of the arterial system would be expanded through widening or new construction of a total of 111 miles, an approximately 14 percent expansion of the 774-mile system recommended for the year 2010 stage of the plan. The facility construction costs, exclusive of right-of-way acquisition costs, attendant to the improvements required to accommodate planned urban growth in the County after the year 2010, that is, costs over and above those envisioned under the 2010 transportation plan, would approximate \$230 million. The total cost may be expected to be considerably greater, depending on the extent to which the proposed street widenings and other improvements require additional right-of-way acquisition.

As a result of the increased traffic volumes related to full development of the recommended County land use plan, the level of service provided by the East-West Freeway (IH 94) between STH 16 and the Waukesha-Milwaukee County line may be expected to decline significantly. Currently, moderate congestion, with restrictions on lane changes and speed reductions of 5 to 10 miles per hour, occurs in both directions on IH 94 between STH 18 and the Milwaukee-Waukesha County line during morning and afternoon peak traffic hours, except on eastbound IH 94 east of Moorland Road, where severe congestion occurs during the morning peak hour. Under the 2010 stage of the plan, during both morning and afternoon peak hours, severe congestion, with reduced speeds of 35 to 45 miles per hour, would be expected between STH 16 and USH 18 and extreme congestion, with stop-and-go driving and speeds of 30 miles per hour or less, would be expected between USH 18 and the Milwaukee-Waukesha County line. Under full development conditions, during morning and afternoon peak hours, extreme congestion would be expected on the entire stretch of IH 94 between STH 16 and the Milwaukee-Waukesha County line.

#### Transit System

Under the recommended year 2010 transit system plan, rapid transit service would be provided by buses operating over freeways in the County, providing service between outlying areas of the County and Milwaukee. Service would be provided in both directions during peak periods. The number of miles and hours transit vehicles would operate on an average weekday would be increased. Initially, all service would be provided by buses operating over the freeway system, with service connections on selected surface arterial streets and highways. Ultimately, depending upon the results of the East-West Corridor Transit study currently being con-

ducted by the Wisconsin Department of Transportation, the rapid-transit service in the eastern portion of the County could be provided by buses operating over busways within, or parallel to, the IH 94 freeway corridor. The plan also recognizes the potential to establish commuter-rail passenger service as an alternative to bus-on-freeway or bus-on-busway rapid-transit service in the Milwaukee-Oconomowoc corridor. The plan recommends that the commuter-rail passenger service potential be evaluated in a 44 "major investment study" for this corridor.

Under the year 2010 transit system plan, express transit service in Waukesha County would be provided by buses operating with limited stops in mixed traffic over surface arterial streets and highways. The plan calls for one express transit route in the County, providing service between the City of Waukesha and Milwaukee.

Under the year 2010 transit system plan, local transit service would be provided by buses operating over arterial and collector streets, with frequent stops for passenger boarding and alighting. The plan proposes the continuation of local transit service in the City of Waukesha and in the Waukesha-Brookfield-Milwaukee corridor, and the expansion of local transit service into medium-density residential areas on the east side of the County. The plan also envisions the provision of local transit service within certain economic activity centers along IH 94, including centers at STH 67, STH 83, and STH 164. Such service would facilitate circulation within those centers and would be linked to the rapid-transit system.

The average annual capital costs for implementing the County component of the recommended transit system plan would approximate \$1.5 million through the year 2010. The average annual operating cost for implementing the County component of the transit system plan through the year 2010, excluding operating costs met by transit fares, would approximate \$4.9 million. The total average annual capital and operating cost for the County component of the plan, excluding amounts met by transit fares, would thus approximate \$6.4 million. Between 1990 and 1994, the actual average annual outlay by the County for transit included \$0.2 million for capital expenditures and \$1.3 million for operating expenditures, or a total expenditure of \$1.5 million per year. Implementation of the transit system plan would thus require a significant increase in the County's annual outlay for transit services.

In view of the relatively low density which would characterize much of the incremental development envisioned under the County land use plan after the year

2010, it is anticipated that only minimal expansion of the transit service area and frequency proposed under the year 2010 plan would be feasible under plan buildout conditions. The modest additions to the transit network and service levels beyond those recommended in the year 2010 plan which may be expected to be warranted under buildout conditions consist of shuttle-bus service which would link rapid-transit service stations to the larger and denser centers of population and employment growth in outlying areas.

#### Transportation System Plan Implementation

Responsibility for implementation of the arterial street and highway system plan rests with the Wisconsin Department of Transportation; the Waukesha County Board and its Public Works Committee; and the city councils, village boards, and town boards and their respective boards of public works. The aforementioned agencies and units of government should cooperatively seek implementation of the jurisdictional transfers recommended in the plan and proceed with preliminary engineering, right-of-way acquisition, and facility construction in accordance with the plan. Waukesha County should amend its highway width map to reflect the rights-of-way of planned State and County trunk highways. Cities, villages, and towns should approve the revised County highway width map and adopt local official maps showing thereon planned State, County, and local trunk highway facilities. The County, city, village, and town governments should exercise their land subdivision control authority to prevent the encroachment of new land divisions into areas needed for the rights-of-way of planned arterial facilities.

Implementation of the arterial street and highway system plan over the next decade should emphasize right-of-way acquisition, engineering, and construction of those facilities called for by the year 2010. During this time, however, efforts should be made to protect from urban encroachment the rights-of-way of arterial facilities needed under County land use plan buildout conditions.

Responsibility for implementation of the recommended transit system plan rests largely with Waukesha County and the City of Waukesha. It is recommended that Waukesha County continue to provide rapid and express transit services within the County through agreements with Milwaukee and Washington Counties, as appropriate. It is also recommended that Waukesha County, working cooperatively with the local units of government in the County, implement the local transit service recommendations of the plan, including the

provision of local transit service within the eastern portion of the County and within the economic activity centers along IH 94. It is recommended that the City of Waukesha Transit System Utility continue to provide local fixed route transit service within the City of Waukesha and adjacent areas. It is further recommended that, over time, as the City transit system is increasingly called upon to serve areas beyond the City limits, the City, in conjunction with Waukesha County, undertake a cooperative study to determine the manner in which the transit function can be most cost-efficiently administered, with the transfer of the local transit function from the City to the County among the options to be considered. Finally, it is recommended that the Wisconsin Department of Transportation, the Waukesha County Board of Supervisors, and the Regional Planning Commission cooperatively conduct the proposed major investment study regarding commuter-rail service as an alternative to bus-on-freeway or bus-on-busway rapid-transit service in the Milwaukee to Oconomowoc corridor.

#### PARK AND OPEN SPACE PLAN

The recommended park and open space plan is intended to serve as a guide to meeting outdoor recreation site and facility needs and open space needs in the County through the year 2010 and beyond. The plan is concerned primarily with the provision of County and State-owned outdoor recreation sites and the protection of primary environmental corridors and other open space lands. The plan recommends the preparation of local park and open space plans by cities, villages, and towns, as appropriate, to guide the provision of local outdoor recreation sites and facilities required to serve residents of their urban areas. The recommended plan consists of an open space preservation element and an outdoor recreation plan element, as described below.

#### Open Space Preservation

The open space preservation plan element builds upon the recommendations for the preservation of environmentally sensitive lands set forth in the County land use plan. Thus, the open space preservation plan recommends the preservation in essentially natural, open use of primary environmental corridor lands and the preservation, to the extent practicable, of secondary environmental corridors and isolated natural resource areas, recognizing that secondary environmental corridors and isolated natural resource areas may be incorporated as drainageways, open space reserves, and



parks in developing areas. In addition, the plan recommends the preservation of lands within the project boundaries of the Wisconsin Department of Natural Resources located outside the planned environmental corridors and isolated natural resource areas. A total of 152 square miles of open space, excluding surface water, is recommended for preservation.

In 1995, a total of about 38 square miles, or about 25 percent of the area recommended for preservation, was in public or quasi-public ownership or in compatible outdoor recreation use. The plan recommends that an additional 51 square miles, or about 33 percent of the area proposed to be preserved, be acquired in the public interest. Lands proposed for acquisition include all primary environmental corridors located in planned urban areas; primary environmental corridors in planned rural areas which are proposed to be included in public parks or parkways; and primary environmental corridors, secondary environmental corridors, and isolated natural resource areas in planned urban areas and planned rural areas which encompass sites identified as important natural areas or critical species habitat areas. The plan envisions that the remaining 63 square miles, or about 42 percent of the open space area to be preserved, would be retained in private ownership and be protected through various types of conservancy zoning as recommended in the land use plan.

#### Outdoor Recreation

The outdoor recreation element of the plan proposes a total of 19 major parks and one special regional outdoor recreation site to meet resource-oriented outdoor recreation needs in the County under build-out conditions. Specifically, the plan proposes the acquisition and development of two new major County parks, one to be located in the City of Brookfield and the other to be located in the Oconomowoc area; additional land acquisition and facility development at six County parks, Fox Bend, Minooka, Monches, Mukwonago, Retzer Nature Center, and Ryan; and additional facility development at six County parks, Fox River, Menomonee, Muskego, Naga-Wauke, Nashotah, and Wanaki. Most note-worthy among the additional recreational facilities proposed at the major County parks are the proposed development of a swimming beach at Fox Brook park and the development of 18-hole, regulation golf courses at Minooka and Mukwonago Parks and the proposed Oconomowoc area park. The plan further envisions maintenance of three major parks, Lapham Peak, Ottawa Lake Recreation Area and Pine Woods Campground, by the Wisconsin Department of Natural Resources; maintenance of the special regional outdoor recreation site, Old World Wisconsin, by the

Department and by the State Historical Society of Wisconsin; and the maintenance of two other major parks, Wirth and New Berlin Hills Golf Course, by the City of Brookfield and City of New Berlin, respectively.

The plan also recommends the provision of a 200-mile system of recreation trails within the County, providing opportunities for such activities as bicycling, hiking, nature study, and cross-country skiing. Of the recommended trail system, about 146 miles, or about 73 percent, would be provided by Waukesha County and about 54 miles, or 27 percent, by the Wisconsin Department of Natural Resources. Thirty-six miles of the recommended County trail system and 45 miles of the recommended State trail system were constructed by 1996.

The plan recommends the development of access facilities to provide the public with opportunities for water-related recreation activities such as motor boating, waterskiing, fishing, and canoeing on major lakes and rivers in the County. The plan recommends that the Wisconsin Department of Natural Resources acquire land for, and develop, public boat access sites on Crooked Lake, Moose Lake, North Lake, Spring Lake, Upper Nashotah Lake, and Waterville Pond; develop a boat-access facility on State-owned land on Hunters Lake and on Lake Keesus; provide additional car-trailer parking facilities at Beaver Lake and Okauchee Lake; and consider the provision of an access site on Lower Nashotah Lake. The plan further recommends that the Department of Natural Resources provide a Fox River canoe-access site at the Vernon Marsh Wildlife Area and that Waukesha County provide canoe-access sites along the Fox River at Fox Bend and Fox River parks.

#### Park and Open Space Plan Implementation

Responsibility for implementation of the park and open space plan rests primarily with the Wisconsin Department of Natural Resources and Waukesha County. Under the plan, the Department of Natural Resources would be responsible for the maintenance of existing State-owned recreation and open space sites in the County, the acquisition of certain lands for resource preservation purposes, the acquisition and development of portions of the proposed area-wide recreational trail system in the County, and the acquisition and development of boat and canoe access sites. Total land acquisition and facility development costs for the Department under the plan buildout conditions approximate \$23.9 million. Under the plan, Waukesha County would be responsible for the acquisition and development of major parks, the acquisition of open space lands for resource preservation purposes, the

acquisition and development of portions of the proposed areawide recreational trail system in the County, and the provision of canoe access sites along the Fox River. Total acquisition and facility development costs for the County under the plan buildout conditions approximate \$52.8 million. A substantial portion of this total cost may be offset by State and Federal recreation and open space grant program funds, land dedications, donations, and revenues generated by existing parks and recreational facilities.

Under the plan, part of the responsibility for open space acquisition is assigned to local units of government and nonprofit conservation organizations in accordance with previously adopted local plans. In addition, local government acquisition of certain open space sites which, based upon their small size, are more properly considered to be of local, rather than countywide, significance is also recommended. Total open space acquisition costs for local units of government under the plan buildout conditions approximate \$28.8 million. Open space acquisition costs for nonprofit conservation organizations approximate \$5.2 million. These costs may also be offset by State and Federal recreation and open space grant program funds.

Park and open space acquisition and development recommended to be undertaken by Waukesha County through the year 2010 would approximate \$25 million. Spread over 15 years, from 1996 through the year 2010, the average annual capital outlay required by the County would approximate \$1.67 million. This compares to the average annual capital outlay of \$1.69 million designated for park and open space acquisition and development for the years 1996 through 2000 in the current County capital improvement program.

## PLAN ADOPTION

The preparation of the Waukesha County development plan was undertaken in accordance with Section 59.97(3) of the Wisconsin Statutes which authorizes and governs the preparation of such plans. Section 59.97(3) specifies the territory which may be included in a county development plan, indicates the permissible scope and content of such plans, and establishes public hearing and plan adoption procedures. In accordance with Section 59.97(3), the county zoning agency, that is, the Waukesha County Park and Planning Commission, should hold a public hearing on the proposed development plan. After approval of that plan, the Park and Planning Commission should submit the plan to the County Board of Supervisors for approval and adoption. the County Board should adopt the plan by ordinance

pursuant to Section 59.97(3). By so doing, Waukesha County may be able to use as a basis for subdivision plat approval the provisions of Section 236(l) of the Wisconsin Statutes, which require that, in order to be approved, a subdivision must be found to be in compliance with any municipal, town, or county ordinance. Upon adoption of the County development plan by ordinance, the normal provisions of ordinance publication would apply.

While the County development plan set forth in this report applies directly to the thirteen civil towns which comprise the unincorporated territory of the County, it is also intended to provide guidance to the incorporated cities and villages which were involved in the planning process. Upon adoption by the County Board, the plan should be certified by the County clerk to the clerks of each of the thirteen civil towns. While not required by Statute, endorsement of the County development plan by the civil towns is desirable and should be sought.

The plan should also be transmitted to the cities and villages in Waukesha County. Endorsement by the cities and villages would be desirable and should also be sought. Transmittal of the plan to cities and villages is not intended to meet a statutory requirement; rather, it is intended for informational purposes, providing a basis for the common understanding and general support of the land use, housing, transportation, and recreation objectives of the plan.

## MONITORING AND UPDATING THE PLAN

In view of the anticipated continued rapid growth and development of the County, provision should be made for the periodic review and reevaluation of the plan to ensure that it continues to properly reflect changing conditions and any changes in county and local development objectives. In this respect it is recommended that the implementation status of the plan be reviewed annually and that a reevaluation, update, and revision, as appropriate, of the plan be conducted every five years. It is recommended that Waukesha County provide requisite funding for the recommended annual review and five-year update of the plan.

Adoption of the County development plan will also require the revision of the County agricultural preservation plan adopted by the Waukesha County board in 1984. Under Chapter 91 of the Wisconsin Statutes, county agricultural preservation plans, plans which facilitate participation by farmland owners in the Wisconsin Farmland Preservation tax-credit program, must be consistent with the any county development

plan prepared under Section 59.97(3). As indicated in Chapter IX of this report, the Waukesha County development plan incorporates a set of criteria for the identification of prime agricultural lands substantially different from the criteria utilized in the 1984 County agricultural preservation plan. Accordingly, following adoption of the County development plan, Waukesha County should revise, the existing County agricultural preservation plan to achieve consistency with the new development plan, meeting all of the requirements pertaining to the preparation of county agricultural preservation plans set forth in Chapter 91 of the Wisconsin Statutes.

#### CONCLUDING REMARKS

The development plan for Waukesha County presented in this report represents the first county development plan, prepared under the provisions of Section 69.97(3) of the Wisconsin Statutes, in the seven-county Southeastern Wisconsin Region. The plan provides the County and the thirteen civil towns in the County a basis for cooperative decision-making in their efforts to guide urban and rural development within the County through the year 2010 and beyond. Consistent application of the plan will assure the orderly growth of urban development areas; the maintenance of rural character in rural development areas; the preservation of the remaining prime agricultural lands for agricultural use; the preservation of environmentally sensitive areas, including, most importantly, the primary environmental corridors; the provision of a balanced housing stock as warranted by the wide range of employment opportunities provided within the County; and the efficient and effective provision of transportation facilities, parks, and other public facilities and services.